

REMARKS

As of the filing of the present reply, claims 11-14, 18 and 20 were pending in the above-identified US Patent Application.

In the Office Action, the Examiner rejected claims 11, 14, 18 and 20 under 35 USC §103 as unpatentable over U.S. Patent No. 6,835,465 to Allen et al. (Allen) in view of U.S. Patent No. 5,390,217 to loki et al. (loki), and rejected claims 12 and 13 under 35 USC §103 as unpatentable over Allen in view of loki and in further view of U.S. Patent No. 6,312,832 to Alperine et al. (Alperine).

In response, Applicants have presented new dependent claim 26, which depends from independent claim 11 and recites that the thermal-insulating material has a binary composition containing a stabilizer. Support for this amendment can be found in Applicants' specification at paragraph [0020].

Applicants respectfully believe the above amendments do not present new matter. Favorable reconsideration and allowance of 11-14, 18, 20 and 26 are respectfully requested in view of the above amendments and the following remarks.

Regarding the §103 rejection based on Allen and Ioki, Allen discloses a coating 4 that contains a “fugitive material” in combination with “compositions such as ternary or pseudoternary oxides having a pyrochlore or perovskite structure” to promote the abrasability of the coating by increasing the porosity (pores 12, 14 and 16) of the coating 4. Column 8, lines 53-63. According to Allen, YSZ coatings exhibit insufficient abrasability, possibly because YSZ exhibits “relatively poor resistance to sintering.” Column 8, lines 44-52 (see also column 3, lines 20-23). In contrast, Allen’s coating 4 formed of ternary or pseudoternary oxides exhibits superior resistance to sintering. Column 10, line 65-column 11, line 1.

Nowhere does Allen disclose or suggestion that the coating 4 is deposited to contain open porosity (i.e., defined by Applicants at paragraph [0028] as porosity that allows a gas to permeate a coating). Consequently, nowhere does Allen disclose or suggest closing open porosity within the coating 4 by sintering the coating 4. Furthermore, Allen discloses that the coating 4 exhibits superior resistance to sintering. As such, nothing in Allen suggests that the coating 4 could be sintered to close any open porosity within the coating 4.

In view of the above, Applicants respectfully believe that Allen does not disclose or suggest Applicants' method of depositing a coating to contain open porosity, then sintering the coating to close the open porosity and, in so doing, "entrap [a] carbon-containing gas within the closed pores (32)."

Because loki was merely cited for disclosing that graphite partially sublimates at 2800°C (Office Action at page 3), Applicants respectfully request withdrawal of the rejection under 35 USC §103 based on the combination of Allen and loki.

Because Alperine was merely cited for disclosing that coatings can be deposited from ingots of coating materials (Office Action at page 3), Applicants also respectfully request withdrawal of the rejection under 35 USC §103 based on the combination of Allen, loki and Alperine.

Finally, Allen specifically discloses that thermal-insulating materials formed of binary compositions and stabilizers promote "aging" (column 3, lines 15-33; column 4, lines 32-33; column 7, lines 9-12). Therefore, Allen teaches away from the use of such materials, and in any event does not suggest any benefit to incorporating Allen's "fugitive material" into a binary composition that contains a stabilizer and is prone to "aging," such as the thermal-insulating material now recited in new dependent claim 26.

Application No. 10/710,895
Technology Center 1712
Reply dated September 14, 2010
In response to Office Action of May 14, 2010

Should the Examiner have any questions with respect to any matter
now of record, Applicants' representative may be reached at (219) 462-4999.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Domenica N.S. Hartman". The signature is fluid and cursive, with the first name "Domenica" written in a larger, more prominent script than the last name "Hartman".

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